Application No. 10/580,267

Amendment dated June 10, 2009

Reply to Office Action of February 10, 2009

**AMENDMENTS TO THE CLAIMS** 

1. (Currently Amended) A heat exchanger plate comprising a number of turbulence-

promoting protuberances which project from the plane of the heat exchanger plate, the

protuberances being spaced apart from each other by a substantially flat base portion at a bottom

of the heat exchanger plate.

wherein each of the protuberances has an isolated zone with a surface profile extending

over substantially the whole surface of the protuberance for promoting break-up of laminar

boundary layers, and the surface profile has spherical or ellipsoid segments.

2. (Previously Presented) The heat exchanger plate as claimed in claim 1, which together

with a plurality of identical heat exchanger plates is stackable in such a manner that the

protuberances in a first heat exchanger plate are partially accommodated in the protuberances in

a second heat exchanger plate.

3. (Previously Presented) The heat exchanger plate as claimed in claim 1, in which the

protuberances are symmetrically arranged.

4. (Previously Presented) The heat exchanger plate as claimed in claim 1, in which the

surface profile has a profile depth that is considerably smaller than the depth of the pro-

tuberances.

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5. (Previously Presented) The heat exchanger plate as claimed in claim 1, in which the

surface profile is concavely or convexly arranged relative to the protuberances.

6. (Previously Presented) The heat exchanger plate as claimed in claim 1, in which the

geometric transition between the plane of the heat exchanger plate and the protuberances is

provided with a radius.

7. (Previously Presented) The heat exchanger plate as claimed in claim 1, in which the

surface profile together with the protuberances forms a golf-ball-like structure.

8. (Currently Amended) A plate heat exchanger comprising heat exchanger plates with

turbulence-promoting protuberances which are arranged in each heat exchanger plate, the

protuberances being spaced apart from each other by a substantially flat base portion at a bottom

of a corresponding one of the heat exchanger plates,

wherein each protuberance has an isolated zone with a surface profile extending over

substantially the whole surface of the protuberance for promoting break-up of laminar boundary

layers, and the surface profile has spherical or ellipsoid segments.

9. (Previously Presented) The plate heat exchanger as claimed in claim 8, in which the

heat exchanger plates are arranged so that the protuberances in a first heat exchanger plate in

connection with stacking are partially accommodated in the protuberances in a second heat

exchanger plate.

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10. (Previously Presented) The plate heat exchanger as claimed in claim 8, in which the

heat exchanger plates are arranged in pairs with a first pair of plates and a second pair of plates

adjoining the first, in which pairs of plates a first and a second plate are arranged with the

protuberances directed away from each other and in which pairs of plates a gap is arranged

between the first and the second plate.

11. (Previously Presented) The plate heat exchanger as claimed in claim 8, in which the

protuberances in each heat exchanger plate are symmetrically arranged.

12. (Previously Presented) The plate heat exchanger as claimed in claim 8, in which the

surface profile has a profile depth which is considerably smaller than the depth of the

protuberances.

13. (Previously Presented) The plate heat exchanger as claimed in claim 8, in which the

surface profile of each protuberance is concavely or convexly arranged relative to the

protuberance.

14. (Previously Presented) The plate heat exchanger as claimed in claim 8, in which the

protuberances together with the surface profile form a golf-ball-like structure.

15. (Cancelled)

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16. (Currently Amended) The heat exchanger plate as claimed in elaim 15claim 1, wherein the isolated zones protuberances are spherical or ellipsoid.

17. (Cancelled)

- 18. (Currently Amended) The heat exchanger plate as claimed in claim 17claim 8, wherein the isolated zones protuberances are spherical or ellipsoid.
- 19. (Previously Presented) The plate heat exchanger as claimed in claim 9, wherein the protuberances of the first heat exchanger plate are smaller than the protuberances of the second heat exchanger plate.